What is claimed is:

1. A modem apparatus comprising:

demodulating means for demodulating reception symbols subjected to quadrature amplitude modulation;

memory that stores the demodulated reception symbols; and

identifying means for detecting the rotation direction of the reception symbols from two consecutive symbols stored in said memory and identifying a control signal sent at the beginning of a control channel.

2. The modem apparatus according to claim 1, wherein said identifying means finds coordinates of the demodulated reception symbols on a signal space diagram, calculates a cross product of two vectors from the origin to the coordinates of two consecutive symbols and determines the rotation direction of the reception symbols from a polarity array configured by polarities of the calculation result arrayed over a span of a plurality of consecutive symbols.

3. The modem apparatus according to claim 2, wherein said identifying means identifies an Sh signal exchanged in the control channel by monitoring the rotation direction of the reception symbols during a communication compliant with the Recommendation V.34.

4. The modem apparatus according to claim 3, wherein said identifying means identifies an Sh signal when positive polarity appears at least two times consecutively in the polarity array after a communication is started through the control channel.

5. An image communication apparatus comprising:

the modem apparatus according to claim 1;

reading means for reading image data; and

recording means for recording image data received by said modem apparatus.

6. A communication control method comprising the steps of:

demodulating reception symbols subjected to quadrature amplitude modulation;

storing the demodulated reception symbols in memory; and

detecting the rotation direction of the reception symbols from the stored two consecutive symbols and identifying a control signal sent at the beginning of a control channel.

7. A communication control method comprising the steps of:

demodulating reception symbols subjected to quadrature amplitude modulation and finding coordinates on a signal space diagram when a communication is started

through a control channel in a half-duplex communication compliant with the Recommendation V.34;

calculating a cross product of two vectors from the origin to the coordinates of two consecutive symbols; and

identifying a control signal from a polarity array configured by polarities of the calculation result arrayed over a span of a plurality of consecutive symbols.

8. The communication control method according to claim 7, wherein an Sh signal exchanged in said control channel is identified by monitoring the rotation direction of the reception symbols.

9. The communication control method according to claim 8, wherein an Sh signal is identified when positive polarity appears at least two times consecutively in the polarity array when a communication is started through the control channel.